

EMBERTECH – IN HOME DISPLAY (IHD), Model BBBA

Operational Description

A brief description of the circuit functions of the device along with a statement describing how the device operates. This statement should contain a description of the ground system and antenna, if any, used with the device.

The circuit consists of:

- ARM9 processor with integrated PMIC, RAM 64MB and NAND Flash 512MB.
- Temperature/humidity sensor, Proximity/ALS Sensor and LEDs connected via I2C.
- Combined Wi-Fi and Bluetooth module with TI chip antennae design. Wi-Fi is connected to the main processor via SDIO interface and the Bluetooth is connected via UART.
- Zigbee Module with integrated chip antennae and is connected to the main processor via a UART interface.

The unit is power via an isolated mains plug pack and has a single isolated ground.

The Emberpulse operates as a gateway to connect to a ZigBee Smart Energy network for communicating with a smart electricity meter as well as creating a ZigBee Home Area network for home automation.

Emberpulse will use either the Wi-Fi or Ethernet to connect via the home internet router to a cloud service for web and mobile app integration.

Bluetooth and WiFi connectivity may also be used to connect to home appliances for home automation purposes.

See below for a block diagram of the device circuit, including the identification of major components.

